

Application No. 10/799,868
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1. (canceled)
2. (canceled)
3. (currently amended) A method for transmitting data frames in a communications system comprising a transmitter and a receiver, comprising:
transmitting a data frame from said transmitter to said receiver;
when said transmitter receives a request from the receiver for retransmission of
said data frame, retransmitting said data frame to the receiver without transmitting a
signaling message identifying said retransmitted data frame;
receiving said retransmitted data frame at said receiver;
comparing said received retransmitted data frame to data frames stored in a
buffer, the data frames stored in the buffer comprising data frames that were received
with errors;
identifying a first data frame stored in the buffer which potentially corresponds to
the received retransmitted data frame; and
combining the received retransmitted data frame with the first data frame to form
a combined data frame; and
wherein the comparing comprises determining whether a likelihood of a match
between said received retransmitted data frame and one of said data frames in said
buffer exceeds a first predetermined threshold; and
wherein the identifying comprises identifying a data frame in which the likelihood
of a match exceeds the first predetermined threshold as the first data frame; and
The method of claim 2, further comprising:
performing an error check on the combined data frame; and
when said combined data frame does not pass the error checking, said receiver
performs the following:

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storing in said buffer either said combined data frame, or said received retransmitted data frame and said first data frame, depending on whether the likelihood of the match exceeds a second predetermined threshold; and

sending another retransmission request to said transmitter to request said transmitter to again retransmit said data frame.

4-7. (canceled)

8. (currently amended) A method for transmitting data frames in a communications system comprising a transmitter and a receiver, comprising:
transmitting a data frame from said transmitter to said receiver;
when said transmitter receives a request from the receiver for retransmission of said data frame, retransmitting said data frame to the receiver without transmitting a signaling message identifying said retransmitted data frame;
receiving said retransmitted data frame at said receiver;
comparing said received retransmitted data frame to data frames stored in a buffer, the data frames stored in the buffer comprising data frames that were received with errors;
identifying a first data frame stored in the buffer which potentially corresponds to the received retransmitted data frame; and
combining the received retransmitted data frame with the first data frame to form a combined data frame; and
wherein the comparing comprises comparing a likelihood of a match between said received retransmitted data frame and the data frames stored in said buffer to a first threshold, and when said likelihood is below said first threshold for each of the data frames stored in the buffer, storing said received retransmitted data frame in said buffer; and
wherein when said likelihood is at or above said first threshold for one of the data frames stored in the buffer, identifying the one data frame as the first data frame; and
The method of claim 6, further comprising:

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verifying a criteria of said combined data frame; and
when said criteria of said combined data frame is unacceptable, comparing said likelihood to a second threshold.

9. (currently amended) The method of claim 8, further comprising:
when said likelihood is above said second threshold, storing said combined data frame in said buffer; and
when said probability likelihood is below said second threshold, storing said received retransmitted data frame and said first data frame in said buffer.

10-26. (canceled)

27. (currently amended) A method, comprising:
receiving a data frame;
performing an error check on the data frame;
storing the data frame in a buffer when the data frame does not pass the error
check;
transmitting a request for retransmission of the data frame;
receiving the retransmitted data frame, the retransmitted data frame being
received without a signaling message identifying the retransmitted data frame;
comparing the retransmitted data frame to data frames stored in the buffer, the
data frames stored in the buffer comprising data frames that were received with errors
and combined data frames that did not pass an error check;
Identifying a first data frame stored in the buffer that potentially corresponds to
the retransmitted data frame; and
combining the retransmitted data frame with the first data frame to form a
combined data frame; and
wherein the comparing comprises determining whether a likelihood of a match
between the retransmitted data frame and one of the data frames stored in the buffer
exceeds a first threshold; and

wherein the identifying comprises identifying a data frame in which the likelihood of the match exceeds the first threshold as the first data frame; and

further comprising:

decoding the combined data frame;

performing an error check on the decoded combined data frame;

deleting the first data frame from the buffer when the decoded combined data frame passes the error check;

~~The method of claim 26, further comprising:~~

determining, when the decoded combined data frame does not pass the error check, whether the likelihood of the match is greater than a second threshold;

storing the combined data frame in the buffer, when the likelihood is greater than the second threshold; and

deleting the first data frame from the buffer, when the likelihood is greater than the second threshold.

28. (previously presented) The method of claim 26, further comprising:

determining, when the decoded combined data frame does not pass the error check, whether the likelihood of the match is greater than a second threshold;

storing the retransmitted data frame in the buffer, when the likelihood is not greater than the second threshold; and

not storing the combined data frame in the buffer, when the likelihood is not greater than the second threshold.

29-33. (canceled)

34. (currently amended) A computer-readable medium having stored sequences of instructions, the instructions controlling a device to perform a method comprising:

receiving a data frame;

performing an error check on the data frame;

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storing the data frame in a memory when the data frame does not pass the error check;

transmitting a request for retransmission of the data frame;

receiving the retransmitted data frame, the retransmitted data frame being received without a signaling message identifying the retransmitted data frame;

comparing the retransmitted data frame to data frames stored in the memory, the data frames stored in the memory comprising data frames that were received with errors;

identifying a first data frame stored in the memory that potentially corresponds to the retransmitted data frame; and

combining the retransmitted data frame with the first data frame to form a combined data frame

wherein the comparing comprises determining whether a likelihood of a match between the retransmitted data frame and one of the data frames stored in the memory exceeds a first threshold; and

wherein the identifying comprises identifying a data frame in which the likelihood of the match exceeds the first threshold as the first data frame; and

wherein the method further comprises:

decoding the combined data frame;

performing an error check on the decoded combined data frame;

deleting the first data frame from the memory when the decoded combined data frame passes the error check;

~~The computer-readable medium of claim 33, wherein the method further comprises:~~

determining, when the decoded combined data frame does not pass the error check, whether the likelihood of the match is greater than a second threshold;

storing the combined data frame in the memory, when the likelihood is greater than the second threshold;

deleting the first data frame from the memory, when the likelihood is greater than the second threshold; and

storing the retransmitted data frame in the memory, when the likelihood is not greater than the second threshold.

35-38. (canceled)

39. (currently amended) A system, comprising:

a receiver configured to receive data frames;

a memory;

logic configured to:

receive a data frame from the receiver,

perform an error check on the data frame,

store the data frame in the memory when the data frame does not pass the error check; and

a transmitter configured to transmit a request for retransmission of the data frame, the logic being further configured to:

receive, via the receiver, the retransmitted data frame, the retransmitted data frame being received without a signaling message identifying the retransmitted data frame,

compare the retransmitted data frame to data frames stored in the memory, the data frames stored in the memory comprising data frames that were received with errors,

identify a first data frame stored in the memory that potentially corresponds to the retransmitted data frame, and

combine the retransmitted data frame with the first data frame to form a combined data frame

wherein when comparing, the logic is configured to determine whether a likelihood of a match between the retransmitted data frame and one of the data frames stored in the memory exceeds a first threshold, and when identifying, the logic is configured to identify a data frame in which the likelihood of the match exceeds the first threshold as the first data frame; and

wherein the logic is further configured to:
decode the combined data frame,
perform an error check on the decoded combined data frame,
delete the first data frame from the memory when the decoded combined
data frame passes the error check,
~~The system of claim of claim 38, wherein the logic is further configured to:~~
determine, when the decoded combined data frame does not pass the error check, whether the likelihood of the match is greater than a second threshold,
store the combined data frame in the memory, when the likelihood is greater than the second threshold,
delete the first data frame from the memory, when the likelihood is greater than the second threshold, and
store the retransmitted data frame in the memory, when the likelihood is not greater than the second threshold.

40. (canceled)

41. (canceled)